			H'!
	Application No.	Applicant(s)	
Notice of Allowability	10/630,690	LAILLY ET AL.	
	Examiner	Art Unit	
	Victor J. Taylor	2863	
The MAILING DATE of this communication appearance All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this app or other appropriate communication IGHTS. This application is subject to	olication. If not include will be mailed in due	ed course. <b>THIS</b>
1. This communication is responsive to <u>5/25/2005</u> .			
2. The allowed claim(s) is/are 11-47.			
3. The drawings filed on 25 May 2005 are accepted by the Ex	kaminer.	•	
<ul> <li>4.  Acknowledgment is made of a claim for foreign priority ur</li> <li>a)  All b)  Some* c)  None of the:</li> <li>1.  Certified copies of the priority documents have</li> <li>2.  Certified copies of the priority documents have</li> <li>3.  Copies of the certified copies of the priority documents have</li> <li>International Bureau (PCT Rule 17.2(a)).</li> <li>* Certified copies not received:</li> <li>Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN</li> </ul>	e been received. e been received in Application No cuments have been received in this of	national stage applica	
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.  5. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give	itted. Note the attached EXAMINER		IOTICE OF
6. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.		
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached			
1) 🗌 hereto or 2) 🗍 to Paper No./Mail Date			•
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date			
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t	.84(c)) should be written on the drawir he header according to 37 CFR 1.121(	ngs in the front (not the d).	e back) of
7. DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT	SIT OF BIOLOGICAL MATERIAL R FOR THE DEPOSIT OF BIOLOGICA	nust be submitted. I AL MATERIAL.	Note the
		•	
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)	5. Notice of Informal P	atent Application (PT)	O-152)
Notice of Preferences Glied (175-692)      Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summary		o,
3. Information Disclosure Statements (PTO-1449 or PTO/SB/0	Paper No./Mail Dat	tè	
Paper No./Mail Date  4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	8. ⊠ Examiner's Stateme 9. □ Other	ent of Reasons for Allo	owance

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## **DETAILED ACTION**

## Response to Arguments

1. Applicant's arguments, see the response to the Ex parte Quayle action filed 5/25/2005 with respect to the amendment to the abstract and the new drawing for figure 5 with the corresponding amendment to the specification and amendment to the claims have been fully considered and are persuasive. The objection to the drawing and the objection to the abstract of 3/25/2005 are moot and have been withdrawn.

## Allowable Subject Matter

- 2. Claims 11-47 are allowed. The applicant canceled claims 1-10.
- 3. The following is an examiner's statement of reasons for allowance:

The reasons for allowance for the method of forming a model representative of the distribution of a physical quantity in an underground zone with steps for estimating the presence or correlated noises contained in the data and specifying a noise modeling operator are of record allowed on 3/25/2005 as indicated in the Ex parte Quayle action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor J. Taylor whose telephone number is 571-272-2281. The examiner can normally be reached on 8:00 to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Victor J. Taylor Examiner Art Unit 2863

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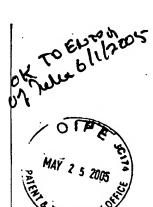


FIG. 15

100 START

-102

AQUIRING MEASUREMENTS GIVING INFORMATION
ABOUT PHYSICAL CHARACTERISTICS OF THE ZONE BY
FOLLOWING A PREDETERMINED EXPERIMENTAL PROTOCOL

-104

SPECIFYING A NOISE MODELLING OPERATOR WHICH ASSOCIATES, WITH A MODEL OF EACH PHYSICAL QUANTITY, SYNTHETIC DATA THAT CONSTITUTE A RESPONSE OF THE MODEL, THE MEASUREMENTS AND THE SYNTHETIC DATA BELONGING TO A DATA SPACE

106ر

SELECTING, FOR EACH CORRELATED NOISE REFERENCED BY A SUBSCRIPT J RANGING FROM 1 TO J, A NOISE MODELLING OPERATOR WHICH ASSOCIATES A CORRELATED NOISE WITH A NOISE-GENERATING FUNCTION BELONGING TO A PREDETERMINED SPACE OF THE NOISE-GENERATING FUNCTIONS (Bj)

-108

SPECIFYING A NORM OR OF A SEMI-NORM IN THE DATA SPACE

-110

SPECIFYING A SEMI-NORM IN THE SPACE OF THE NOISE-GENERATING FUNCTIONS FOR WHICH EACH NOISE MODELLING OPERATOR ESTABLISHES SUBSTANTIALLY AN ISOMETRIC RELATION BETWEEN THE SPACE OF NOISE-GENERATING FUNCTIONS AND THE DATA SPACE

112ر

DEFINING A COST FUNCTION QUANTIFYING A DIFFERENCE
BETWEEN THE MEASUREMENTS ON ONE HAND AND A
SUPERPOSITION OF A MODEL RESPONSE AND OF THE
CORRELATED NOISE ASSOCIATED WITH THE NOISE-GENERATING
FUNCTION ON THE OTHER HAND

-114

ADJUSTMENT OF THE MODEL AND OF THE NOISE-GENERATING FUNCTIONS BY MINIMIZING THE COST FUNCTION, BY MEANS OF AN ALGORITHMIC METHOD TAKING ADVANTAGE OF ISOMETRY OF PROPERTIES OF THE NOISE MODELLING OPERATORS